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Report to the Ranking Minority Member, Subcommittee on Readiness and Management Support, Committee on Armed Services, U.S. Senate

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GENDER ISSUES

Medical Support for Female Soldiers Deployed to Bosnia

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National Security and
International Affairs Division

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The Honorable Charles S. Robb
Ranking Minority Member
Subcommittee on Readiness
and Management Support
Committee on Armed Services
United States Senate

Dear Senator Robb:

At your request, we are reviewing various issues pertaining to the treatment of men and women in the armed services. This report addresses your question concerning whether adequate medical services were available to servicemembers deployed to the field. In this report, we have focused on female-specific medical services and health-related issues for Army personnel serving in the ongoing U.S. peace operation in Bosnia. Specifically, we (1) determined the availability of data collected on female soldiers' health care needs in Bosnia and (2) obtained the views of health care officials and female soldiers on female-specific medical services and health-related issues in Bosnia.

Background

U.S. military forces initially deployed to Bosnia in December 1995 as part of a multinational effort to monitor and enforce implementation of the Dayton Agreement peace accords.[1] Most of the deployed soldiers live and work in base camps in the vicinity of Tuzla. Each camp has a small medical clinic, usually staffed by at least one doctor and other medical personnel, that provides health care services to the camp population. In addition, an Army hospital has been established at one of the base camps to provide a higher level of health care.[2] The hospital is better equipped than the clinics and has a relatively large medical staff. Soldiers who cannot be treated in the theater of operations are evacuated to a military hospital in Germany.

The size of the U.S. force in Bosnia and the proportion of female soldiers there have fluctuated over time as units and individuals rotate. As of

[1]The agreement provided the structure and mandates for an international operation intended to promote an enduring peace in Bosnia and stability in the region.

[2]At the time of our review, the hospital was located in a site known as Blue Factory at Guardian Base. In October 1998, Guardian Base was closed and the hospital was moved to another base.

October 1998, 6,871 U.S. soldiers were serving in Bosnia, with female soldiers numbering 960 (14 percent). Another 1,318 soldiers, including 476 female soldiers (36 percent), were deployed to Croatia and Hungary to support the Bosnia operation.

We obtained information on women's views primarily through a questionnaire of 234 female soldiers who had recently served in Bosnia.[3] We included a wide variety of women in our review. The women were assigned to eight different units and represented three pay grade groups (E-1s to E-4s, E-5s to E-9s, and officers); they had been deployed for varying lengths of time (almost all had served sometime in 1998); and they had served in 12 different base camps. To supplement the survey results and obtain a more complete picture of female-specific health issues in Bosnia, we conducted group interviews with 80 women who participated in our survey. Because our survey participants were not randomly selected, the survey results cannot be projected to a larger population.

Results in Brief

Outpatient health care data is collected from medical treatment facilities in Bosnia, but this data has limited value for assessing the health care needs of deployed female soldiers. First, data collected on non-female-specific health problems is not broken out by gender. Second, while data on gynecological visits is collected, this data does not show the specific reasons for each visit. Consequently, the types and extent of women's health care needs, including female-specific needs, cannot be quantified. Collecting this data would enable the Army to study the everyday aspects of the gynecological health of military women, especially in field conditions, and to identify and correct any shortfalls in medical services provided to deployed women.

Health care officials, including primary care providers who staffed the base camp clinics and the hospital, told us that the Army's health service support system in Bosnia was capable of meeting the female-specific health care needs of women. For example, they said very few women had been evacuated to the military hospital in Germany for female-specific health problems. About two-thirds of the women we surveyed who reported

[3]A small number of these female soldiers had served in a base camp across the border in Croatia. Army officials said the soldiers at this base camp supported the U.S. operation in Bosnia, served under similar deployment conditions, and were provided medical care through the same health service support system.

having gynecological problems said all or most or their female-specific health care needs were met while in Bosnia, while the other one-third said only a few or none of their female-specific health care needs were met. Female soldiers expressed some concerns about the Army's medical services and other health-related issues in Bosnia. A frequent complaint was the lack of information on these subjects provided to women before they deployed. Women said they would have benefited from more information on how to prepare for an impending deployment, for example, information on the availability of female-specific medications and supplies, on the health care system that would serve them during the deployment, and on best practices for staying healthy. Women also expressed concerns about the quality of medical support provided to them and about the privacy and confidentiality of care at the clinics, which were described as very small and lacking interior walls and doors to shield individuals being examined.

Collected Outpatient Data Has Limitations for Assessing Women's Health Care Needs

The great majority of health problems—including female-specific health problems—are resolved on an outpatient basis and do not require hospitalization. In Bosnia, information on soldiers' outpatient visits is gathered through a data collection system that countries participating in the peace operation have adopted. Medical treatment facilities report weekly on their number and types of new outpatient visits. Health officials use the collected data to monitor trends in the incidence of disease and non-battle-related injury.

The data collection system was not designed to capture the gender of soldiers making outpatient visits. Thus, for non-female-specific categories of disease and injury, the data does not show how many men and women made outpatient visits. In the absence of gender-specific data, the total number of outpatient visits by women, the relative number of visits made by men and women, and the proportion of gynecological visits to women's overall visits cannot be determined. Studies from prior deployments showed that female-specific health care needs accounted for a minimum of 14 percent and a maximum of 26 percent of women's health care needs. (See app. II for discussion of this research.)

Gynecological problems are reported as one category of outpatient visits. In 1997, according to an analysis conducted by Army health officials, 1.9 percent of the 38,786 reported outpatient visits by soldiers deployed to Bosnia were for gynecological problems—equating to approximately 740 gynecological visits during the year, or a weekly average of 14. The

data collected on gynecological outpatient visits, however, does not indicate the specific reasons for each visit. For example, the data does not indicate how many visits were for health services such as obtaining birth control refill prescriptions or for specific medical problems such as pelvic pain or menstrual difficulties.

Health Care Officials Said Female Soldiers Received Satisfactory Level of Care in Bosnia

Army officials have characterized the U.S. operation in Bosnia as "one of the healthiest deployments in recent history," with low rates of disease and non-battle-related injury. A 1998 Army health assessment attributed these low rates partly to an emphasis on preventative medicine and the deployment of a healthy, fit force.[4] Health officials we interviewed, including 14 doctors and 9 physician assistants who had served in Bosnia as primary care medical providers, agreed with this overall assessment. In addition, on the basis of their personal experience, these officials did not perceive an unusually high incidence of female-specific health problems. At camps where combat units were primarily assigned, few women were present and medical providers saw very small numbers of female-specific health problems.[5]

According to health care officials, the combined capabilities of the base camp clinics and the in-theater Army hospital provided a satisfactory level of care to female soldiers. Almost all women who sought care for female-specific problems were treated either at the clinics or the hospital, and very few had to be evacuated to Germany. The former commander of the Army hospital in Bosnia said only one such evacuation had been necessary during her recent 6-month deployment. This case involved a woman who needed a follow-up diagnostic procedure for an abnormal Pap smear. The equipment for this procedure was not available at the Army's hospital in Bosnia. Other health care officials recalled similarly small numbers of evacuations for female-specific problems. [6] Data provided by one Army

[4]Other positive factors, according to the assessment, were (1) a relatively friendly host nation populace, (2) mild environmental conditions, (3) limited opportunity for transmission of food-related pathogens, (4) almost exclusive use of bottled water for drinking, and (5) limits on motor vehicle use and alcohol consumption.

[5]Few female soldiers were assigned to these camps because women are barred from holding ground combat positions.

[6]Not included in these anecdotes were women who were evacuated because they tested positive for pregnancy. Such evacuations, unless they involved an abnormal pregnancy, were accomplished through administrative channels rather than through the medical system.

unit shows that of the 229 female soldiers it sent to Bosnia during a 10-month time span, only 4 (1.7 percent) were evacuated for a female-specific health problem and all 4 returned to duty in Bosnia.

Medical providers who staffed the base camp clinics said their mission was to stabilize and evacuate soldiers with acute conditions and treat minor health problems. With respect to female-specific conditions, the providers said they could treat relatively simple problems such as yeast infections and urinary tract infections. They could also test for pregnancy and dispense birth control. The clinics, however, were not equipped to diagnose and treat all female-specific conditions. For instance, providers said they did not have microscopes or a laboratory. However, they generally believed that the equipment they had at the clinics was appropriate for the level of care they provided. They also said they could obtain needed supplies, including medicine.

Medical providers at the base camp clinics described varying approaches for treating female-specific problems. Some providers said they had tried to treat certain conditions before deciding to send women to the Army's in-theater hospital for laboratory tests. Other providers said they had referred women to the hospital if laboratory tests were needed. Some providers said they had performed pelvic exams at the clinics; others said they had not (either because of the lack of privacy or laboratory support). Providers said it was easy to refer a soldier to the Army's in-theater hospital if necessary.

Soldiers referred to the hospital for nonurgent health care problems were typically placed on a convoy leaving the base camp.[7] The soldiers would arrive at the hospital, receive treatment, and then return to their base camp by convoy later that day. Although a gynecologist was not on the hospital staff, a physician certified in family medicine was available to treat female-specific health problems. For problems requiring pelvic exams, the hospital had a private room with a door. It also had a laboratory and ultrasound equipment (which is used to diagnose a wide variety of pelvic problems). The hospital also performed Pap smears.

[7]Emergency cases could be evacuated by ground ambulance or helicopter.

Women Expressed Some Concerns About Female-Specific Medical Services and Other Health-Related Issues

Our survey of female soldiers indicated that gynecological problems were common for this group of women. Of the 234 women taking our survey, 121 (52 percent) reported they had at least one such problem while deployed,[8] though many of these women had not sought medical care for their problems. Of the 121 women reporting that they had gynecological problems, almost two-thirds said all or most of their female-specific health care needs had been met in Bosnia, and one-third said only a few or none of their needs had been met. In our survey and group interviews, several common themes emerged as concerns women had about female-specific medical services and other health-related issues related to deployment in Bosnia. Particular concerns were expressed about predeployment information provided to women on female health and hygiene, the quality of medical support provided for women, and the privacy and confidentiality of care at the base camp clinics. In is unclear to what extent some of the concerns were unique to female-specific health care or were symptomatic of the medical care overall in Bosnia. (See app. I for more detailed information on the views expressed to us by these women.)

Predeployment Information on Female Health and Hygiene

Women in our group interviews emphasized the lack of unit predeployment training on female health and hygiene more than any other issue. They told us they would have benefited from having been better informed about how to prepare for an impending deployment. Some emphasized the need to prepare younger female soldiers with no previous deployment experience. About one-fourth of our survey respondents reported that their unit had been their primary source of information on female-specific health care and hygiene practices in the field. In contrast, about half said they either had not received this type of information prior to deployment or had obtained it through informal conversation with their peers. One unit we visited had deployed more than 200 women, but unit medical officials said information on female-specific health care and hygiene was not part of soldier readiness preparations.

Participants in our group interviews suggested that women with previous deployment experience and medical credentials conduct unit predeployment briefings. Some suggested topics for these briefings were (1) birth control and sexually transmitted diseases; (2) female hygiene in

[8]Not all 234 women taking our survey responded to our questions about whether they experienced gynecological problems while in Bosnia. The proportion of respondents who reported experiencing these problems was higher than 52 percent. (See app. I for further discussion of these survey results.)

field settings, including advice about avoiding urinary tract infections and yeast infections; (3) female-specific health care services available in-theater and ways to obtain these services; (4) guidance on packing sufficient supplies of medications and feminine hygiene products; and (5) tips for staying healthy.

Strategies for preparing female soldiers for deployment also are suggested in an Army handbook developed for military leaders. While the handbook states that responsibility for personal readiness ultimately falls on the soldiers themselves, it suggests that units coordinate a training session for female soldiers with a community health nurse or a representative of the local hospital's department of obstetrics and gynecology. According to the handbook, these health officials can teach women how to prepare themselves for the field and how to maintain their health during deployment.

Quality of Medical Support

The types of gynecological problems women reported experiencing were common problems, such as pelvic cramping or pain and menstrual difficulties. Those who had sought care for gynecological problems typically went to the medical treatment facility serving their base camp. Although some women had positive experiences when seeking care there, others expressed various concerns about the medical support. For instance, about half of the survey respondents who had sought gynecological care while in Bosnia were only mildly confident or not confident at all in the medical provider's abilities.

Women cited various reasons for not seeking care for gynecological problems. The most common reason was that the women had not considered the problems severe or important enough to warrant medical care. Others cited a lack of confidence in the medical providers. When we explored this lack of confidence issue during group interviews, some participants said the medical providers at their base camp did not appear to be well-qualified to provide female-specific care and did not take their health concerns seriously. One woman, for instance, said her company commander had to intervene with the medical provider at the clinic to secure a referral to the Army hospital. Some women noted on their surveys that they would prefer to see a gynecologist for their female-specific problems but that a gynecologist was not available.

The Army has recently taken some steps aimed at evaluating and improving medical support for deployed women. In 1997, a team was chartered to

identify the quantity and quality of well women's services available to active duty women in garrison, prior to deployment, and during deployment. The team is to recommend standards of care necessary to ensure medical readiness for deployment. The results of that effort were undergoing review within the Army. Additionally, the Army has designed a new medical equipment set for providing primary care to female soldiers. The set, to be provided to deployable medical companies, includes the capability of providing gynecological exams and related laboratory tests and provides common medications such as birth control pills and antibiotics. The set is to be tested in 1999 and fielded in 2000.

Privacy and Confidentiality

In the view of many women we interviewed, the small base camp clinics did not offer sufficient privacy to soldiers being examined. Women also had concerns that their medical problems would not be kept confidential by staff at the clinics. Our survey showed that one-fourth of respondents who had sought care were moderately dissatisfied or very dissatisfied with the level of privacy afforded them while receiving care; almost one-third of respondents who had sought care were moderately uncomfortable or very uncomfortable talking with the medical provider about private matters. During the group interviews, some women told us they had been concerned that if they sought care at the clinic, word of their visit would leak out and spread around camp.

Other Health-Related Issues

Some aspects of the deployment received favorable comment regarding their contribution to personal health and hygiene. For example, all but one of the survey respondents reported that a shower or clean water for bathing had been available daily. In addition, more than half of the respondents cited military stores located at the base camps as their primary source of feminine hygiene products.

However, one-fifth of the respondents reported that they had problems obtaining adequate supplies of feminine hygiene products at some time during their deployment. Several respondents, in their write-in comments to the survey, criticized the limited selection of feminine hygiene products at the base camp stores. One wrote, "There was a lack of feminine hygiene products. They always ran out. They had no variety." Another wrote, "Many times a form of feminine hygiene product was available, but it was . . . most often a generic brand unfamiliar to the soldier."

More than half of the survey respondents reported that there were times during the deployment when they had encountered obstacles to urinating. Of the women encountering obstacles, about 20 percent said this problem had occurred on a daily basis. The most frequently cited cause was extended travel time on convoys. When leaving their base camp, U.S. soldiers in Bosnia are required to travel by convoy to enhance force protection. During our group interviews, women said these convoys could last several hours without a stop to urinate. In a write-in comment to the survey, one soldier stated, "The drive from Taszar [Hungary] to Bosnia was 12 hours without urinating and very painful." Real or perceived obstacles to urinating can become a medical problem for women if they decrease their fluid intake and dehydrate themselves.

Overall, more than four-fifths of our survey respondents said they had access to their preferred method of birth control during the deployment. However, a number of women taking birth control pills were concerned about the limited selection available for refill prescriptions at the base camp clinics and were troubled because they had to change to another brand. One woman, for instance, said she had to change prescriptions three times while in Bosnia. Another said she had switched prescriptions while deployed, then switched back when she returned home. Birth control pills, in addition to preventing pregnancy, may be used to regulate a woman's menstrual cycle.

Conclusions

The biggest concern raised by many women we interviewed was the lack of predeployment information provided to deploying women on female health and hygiene. Our survey data indicates that about half the respondents either had not received this type of information prior to deploying to Bosnia or had obtained it on their own through informal conversations with their peers. Female soldiers told us it would have been helpful to receive a briefing on these issues before they deployed. Some women were particularly concerned that younger soldiers with no deployment experience did not receive the information they needed from their unit.

Recommendation

We recommend that the Secretary of the Army take steps to improve the preparation of female soldiers for deployment by requiring units to provide information on female-specific health care and hygiene. Included should be information on the health services available to them once deployed.

Agency Comments

In written comments on a draft of this report, the Department of Defense agreed with our findings and recommendation. The Department stated that adequate preparation of all servicemembers for deployment is a critical element in successfully completing the assigned mission. It further noted that our recommendation to improve preparation of female soldiers for deployment will be adopted. Specifically, the Department said military units will provide information to their female members on female-specific field health care and hygiene issues as well as information on scope and access to deployed health services as part of routine deployment preparations. The Department's comments are reprinted in their entirety in appendix IV.

Our scope and methodology are discussed in appendix III.

We are sending copies of this report to interested congressional committees, the Secretaries of Defense and the Army, and the Director of the Office of Management and Budget. We will make copies available to other parties on request.

If you or your staff have questions concerning this report, please call me at (202) 512-5140. The major contributors to this report are listed in appendix V.

Sincerely yours,

Mark E. Gebicke
Director, Military Operations
and Capabilities Issues

Contents

Figures

Views of Female Soldiers Deployed to Bosnia

This appendix discusses women's views of female-specific medical services and other health-related issues in Bosnia. We obtained information on women's views primarily through a questionnaire of 234 female soldiers who had recently served in Bosnia.[1] The number of respondents to each question varied because (1) some survey respondents were told to skip certain questions based on their answers to other questions and (2) some participants chose not to answer certain questions. The women were assigned to eight different units and represented three pay grade groups (E-1s to E-4s, E-5s to E-9s, and officers); they had been deployed for varying lengths of time (almost all had served sometime in 1998); and they had served in 12 different base camps. To supplement the survey results and obtain a more complete picture of female-specific health issues related to deployment in Bosnia, we conducted group interviews with 80 women who participated in our survey. Because our survey participants were not randomly selected, the survey results cannot be projected to a larger population.

During our review, women expressed some concerns about female-specific medical services and other health-related issues. Particular concerns were expressed about predeployment information on female health and hygiene, the quality of medical support provided for women, and the privacy and confidentiality of care at the base camps. In addition, women expressed concerns about feminine hygiene supplies, obstacles to urinating, and the unavailability of birth control pill prescriptions.

Predeployment Information on Female Health and Hygiene

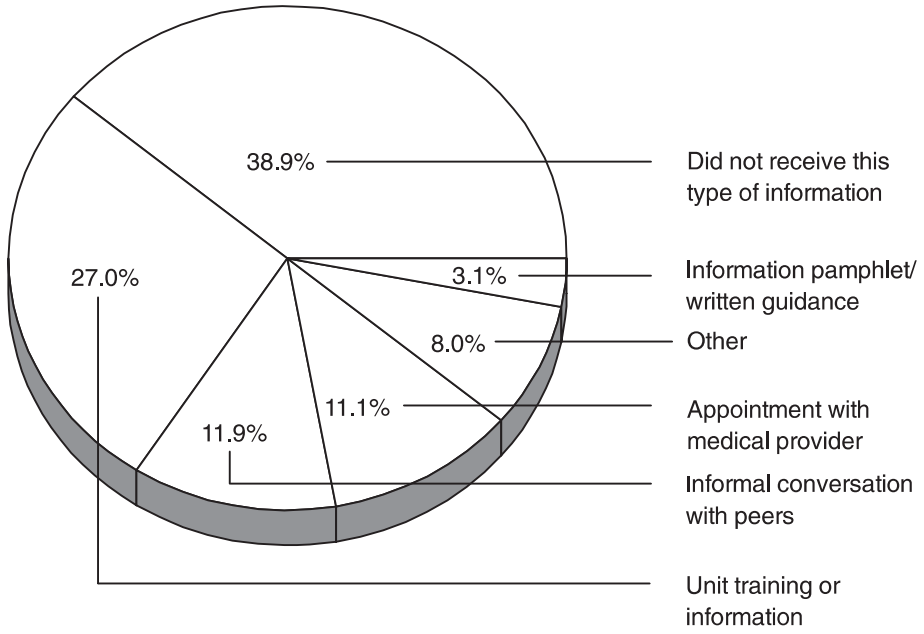
More than three-fourths of the survey respondents felt they were either very prepared (43 percent) or moderately prepared (35 percent) for the Bosnia deployment with respect to female-specific health care and hygiene. Other women said they were only mildly prepared (15 percent) or not prepared at all (7 percent). Nevertheless, many women expressed concerns about their units' efforts to prepare female soldiers for this aspect of deployment

In our survey, we asked women to review the preparations they made prior to deploying to Bosnia and to recall their primary source of information on

[1]A small number of these female soldiers had served in a base camp across the border in Croatia. Army officials said the soldiers at this base camp supported the U.S. operation in Bosnia, served under similar deployment conditions, and were provided medical care through the same health service support system.

female-specific health care and hygiene practices in field conditions. While 61 (27 percent) women said they had received this information primarily through unit training or information sessions,[2] 115 (51 percent) said they either had not received this type of information from any source prior to deployment or had obtained information through informal conversations with peers (see fig. I.1).

Figure I.1: In the 3 months prior to deployment, what was your primary source of information on female-specific health care and hygiene practices in field conditions?



Note: This question was asked to all survey participants and was answered by 226 respondents.

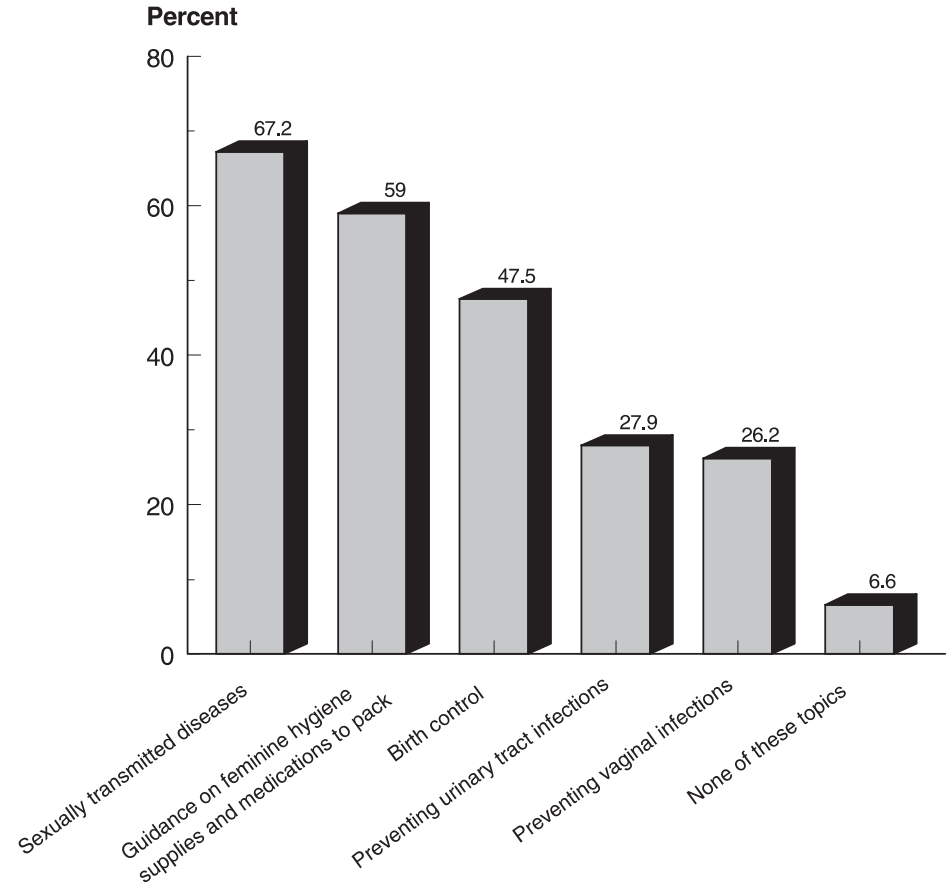
Source: Our analysis of survey responses.

The 61 women who said they had received information from their units prior to deployment indicated that the most common topics covered were sexually transmitted diseases, guidance on packing feminine hygiene supplies and medications, and birth control. Fewer women said their units

[2]Three of these 61 respondents marked more than one answer to this question, indicating that they had important sources of information other than unit training or information sessions.

had provided information on preventing urinary tract infections and vaginal infections (see fig I.2).

Figure I.2: Which topics on female-specific health and hygiene were addressed in the information you received prior to deployment?



Note: This figure shows responses from the 61 women in our survey who reported that their units had been their primary source of predeployment information on female health and hygiene.

Source: Our analysis of survey responses.

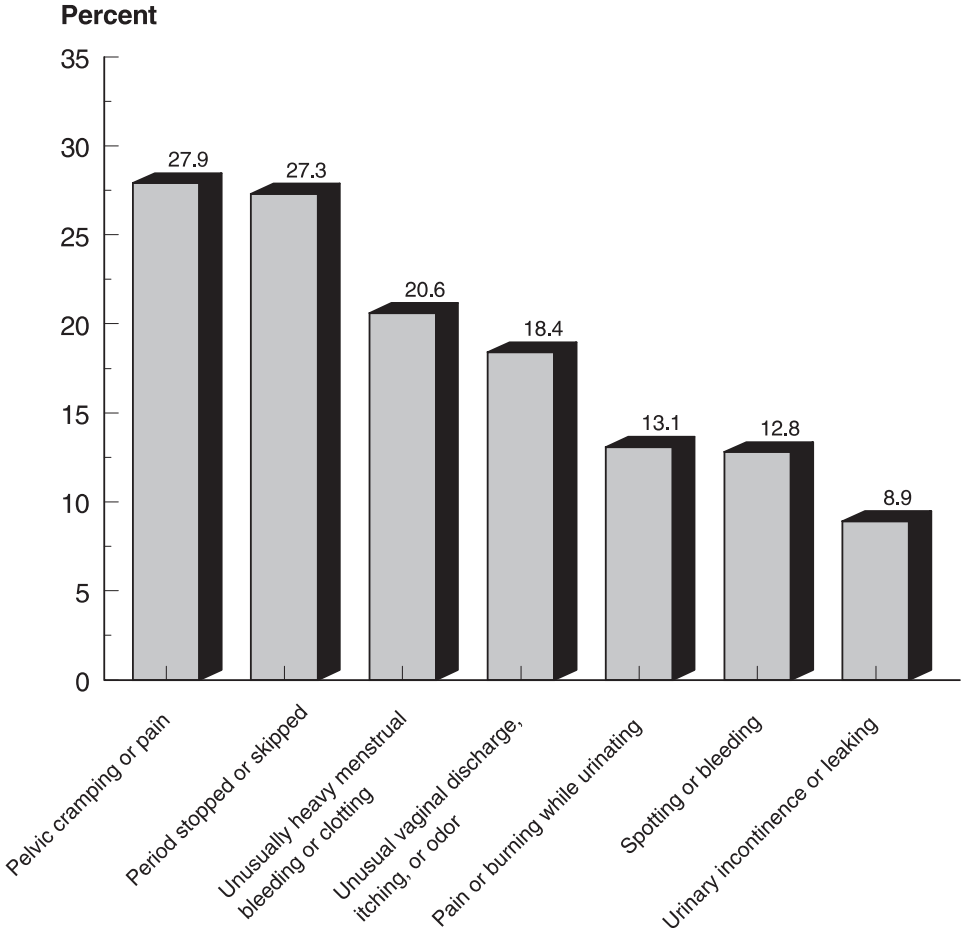
We also asked all survey participants about any female-specific medical conditions that were not resolved prior to deployment. A small group of women—25 (11 percent) respondents—reported they had an unresolved female-specific medical problem. Of these 25 women, 11 said the problem concerned an abnormal Pap smear. We do not know what the other unresolved problems were.

Medical Support

We asked all survey participants what types of female-specific health problems they had experienced while deployed to Bosnia and whether they had sought medical care for these problems. We listed seven possible gynecological problems and asked the women to indicate, for each, whether they (1) did not have the problem, (2) had the problem but did not seek care, or (3) had the problem and sought care.[3] The most commonly experienced problems were pelvic cramping or pain and menstrual difficulties (see fig. I.3).

[3]Respondents were also asked if they experienced other gynecological problems that were not among the seven listed.

Figure I.3: Which of the following gynecological problems did you experience while deployed to Bosnia?



Note: The items in this question were asked to all survey participants and were answered by 211 to 217 respondents.

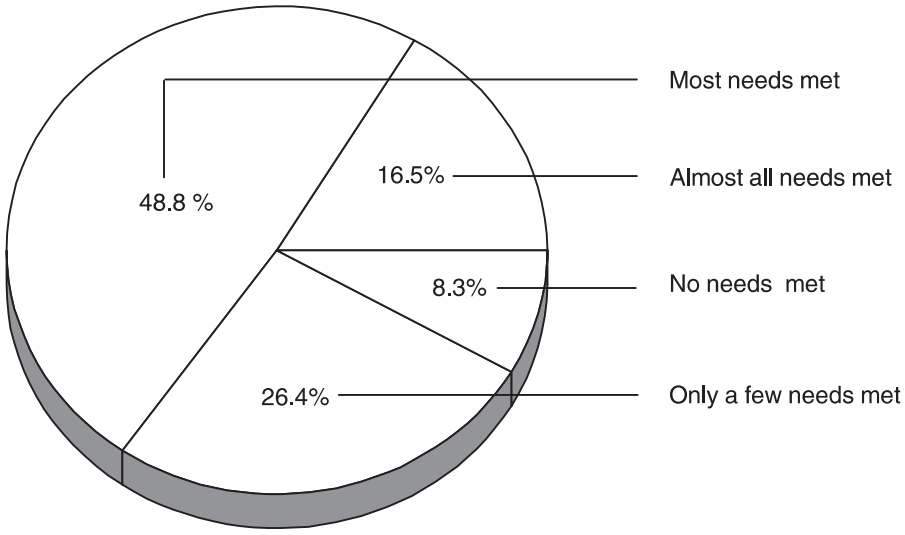
Source: Our analysis of survey responses.

In a subsequent question about what they did to correct such problems, 95 (44 percent) respondents said they had none of the problems, 71 (33 percent) had one or more problems but had not sought care, and 49 (23 percent) had sought care for at least one of these problems.[4] Thus, more than half of the respondents—120 (56 percent) of 215 women—

[4]Another 14 women indicated in the previous question that they had sought care for one of the specific gynecological problems listed but were not consistent in their answers to this question.

reported that they had experienced a gynecological problem in Bosnia.[5] For women who said they had at least one gynecological problem, almost two-thirds said that all or most of their female-specific health care needs had been met in Bosnia, and one-third said only a few or none of their needs had been met (see fig. I.4).

Figure I.4: To what extent did the health services in Bosnia meet your overall female-specific health care needs?



Note: This question was answered by 121 survey respondents who reported experiencing a gynecological problem while in Bosnia.

Source: Our analysis of survey responses.

Of the approximately 60 women who said they had sought care for at least one gynecological problem,[6] more than 80 percent went to the medical treatment facility serving their base camp. We asked the women who had sought care to rate five aspects of that care: (1) confidence in the medical

[5]One respondent indicated in the previous question that she had experienced a gynecological problem, but in this question she did not report having a problem. When this respondent is added, a total of 121 women reported experiencing gynecological problems.

[6]These survey respondents included the 49 women who said they sought care for at least one gynecological problem while in Bosnia as well as 14 other women who indicated in the previous question that they sought care for one of the specific problems listed. Between 55 and 57 of these women answered each of our survey questions concerning the medical care they received.

provider, (2) appropriateness of the gynecological services received, (3) timeliness of care, (4) comfort level talking about private matters, and (5) satisfaction with privacy while receiving care. The last two aspects—comfort level talking about private matters and satisfaction with privacy—are discussed in the next section of this appendix. The survey responses for the other three aspects showed the following:

- Half the respondents were only mildly confident (32 percent) or not confident at all (18 percent) in the medical provider's abilities, and half were very confident (16 percent) or moderately confident (35 percent) in the provider's abilities.[7]
- Considering their particular needs, 61 percent thought the gynecological services they had received were either highly or generally appropriate, 23 percent thought the services were neither appropriate nor inappropriate, and 16 percent thought the services were either generally or highly inappropriate.
- With respect to timeliness of care received, 73 percent said they had received prompt or very prompt care, 22 percent said there had been some delay, and 6 percent said it had taken much too long to receive care.[8]

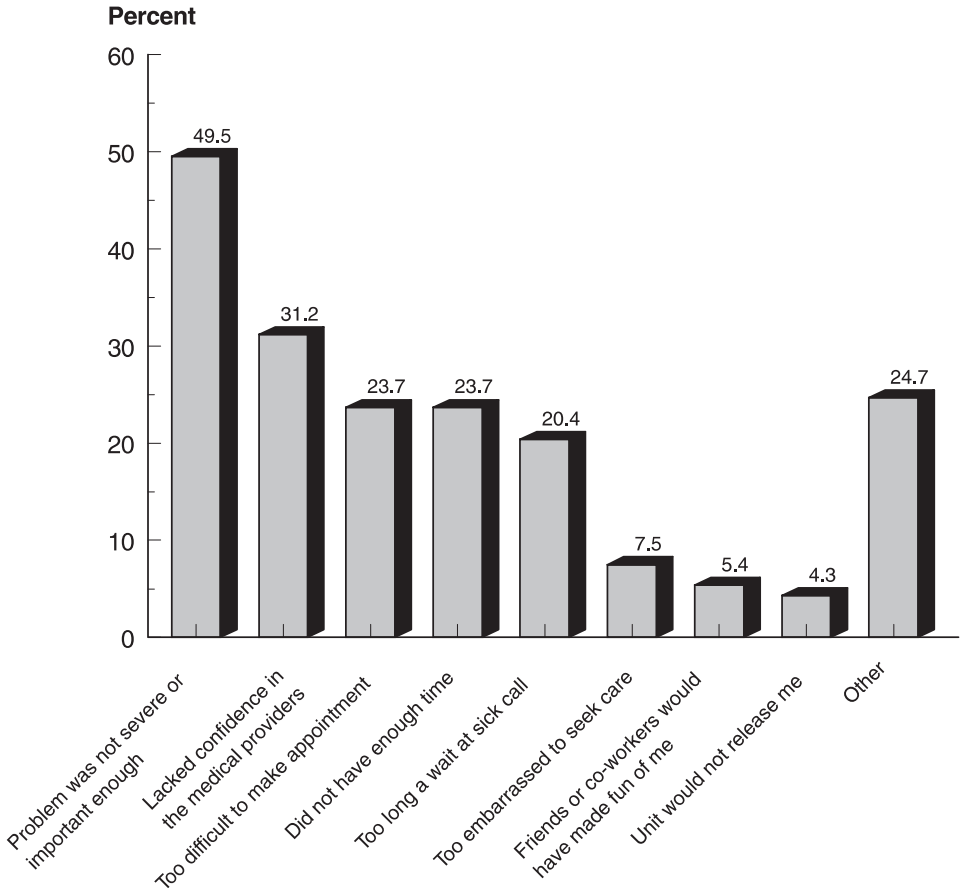
Women who reported in the survey that they had not sought care for one or more gynecological problems were asked to provide reasons. The most prevalent reason cited by the 93 respondents[9] was they did not feel the problems had been severe or important enough to warrant medical attention, and the second most prevalent reason was that the respondent had lacked confidence in the medical provider (see fig. I.5).

[7]Percentages do not add to 100 due to rounding.

[8]Percentages do not add to 100 due to rounding.

[9]The 93 respondents included women who did not seek care for any gynecological problems, as discussed earlier in the appendix, as well as women who sought care for some problems but not for other problems.

Figure I.5: What were the reasons you did not seek care for gynecological problems?



Note: This figure shows responses from the 93 women in our survey who reported that they had not sought care for one or more of the gynecological problems they experienced.

Source: Our analysis of survey responses.

When asked whether they would have sought care if stationed at their home installation, 56 (60 percent) of these 93 respondents said they would have sought care, and 37 (40 percent) said they would not have. Isolating those respondents who reported that they did not seek care for any of the gynecological problems they had in Bosnia, we found that 36 (54 percent)

of 67 respondents would have sought care if they were back home, and 31 (46 percent) would not have sought care.[10]

Privacy and Confidentiality

Women cited concerns about the privacy and confidentiality of care provided at the base camp clinics. Our survey showed that of the approximately 60 women who said they had sought medical care for one or more gynecological problems, 44 percent were very comfortable or moderately comfortable talking with their medical provider about private matters, 23 percent were neither comfortable nor uncomfortable, and 33 percent were moderately uncomfortable or very uncomfortable. In addition, 51 percent were very satisfied or moderately satisfied with their level of privacy while receiving care, 21 percent were neither satisfied nor dissatisfied, and 28 percent were moderately dissatisfied or very dissatisfied.

During our group interviews, some women expressed concerns about a lack of both visual and auditory privacy in the small base camp clinics. For instance, they said that examining rooms lacked doors and that curtains or other dividers used to screen off the examining rooms did not always close completely. Furthermore, discussions in the clinics could easily be overheard by others. Women also were concerned about what they perceived to be a lack of patient confidentiality. They told us that word would leak out if they sought care and that the information about their problem, or an exaggerated version of the problem, would soon spread around camp. Medic staff, rather than doctors or physician assistants, were more often blamed for these breaches of confidentiality.

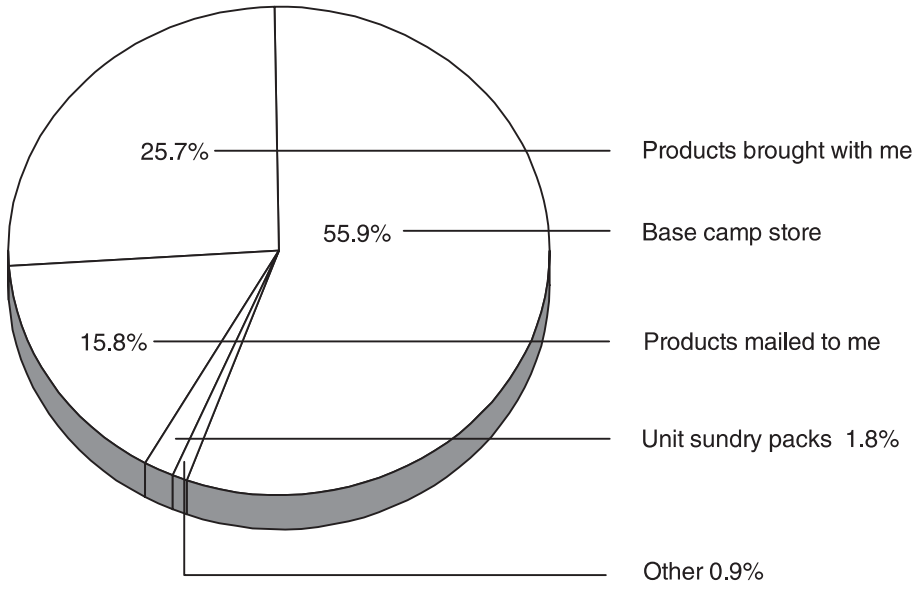
Feminine Hygiene Supplies

Some aspects of the Bosnia deployment received favorable comment regarding their contribution to good personal health and hygiene. For example, all but one of the survey respondents (more than 99 percent) said they had daily access to showers or clean water for bathing. The survey indicated, however, that some women had experienced problems obtaining feminine hygiene products such as tampons and sanitary pads. Of the survey respondents, 45 (20 percent) said there had been times during the deployment when they had not been able to obtain adequate supplies of

[10]Of the 71 respondents who reported earlier in the survey that they had not sought care for any gynecological problems, 2 did not answer this question and 2 answered that this question was not applicable to them, leaving a total of 67 respondents.

these products, while 182 (80 percent) said they had not had such problems. When asked about their primary source of feminine hygiene products, 124 (56 percent) respondents cited base camp stores see fig. I.6).[11] A number of women indicated in the survey that they had been dissatisfied with the limited selection of feminine hygiene products at the base camp stores and complained that the stores had run out of supplies of these products.

Figure I.6: While you were deployed to Bosnia, what was your primary source of feminine hygiene products?



Notes: This question was asked to all survey participants and answered by 222 respondents.

Percentages do not add to 100 due to rounding.

Source: Our analysis of survey responses.

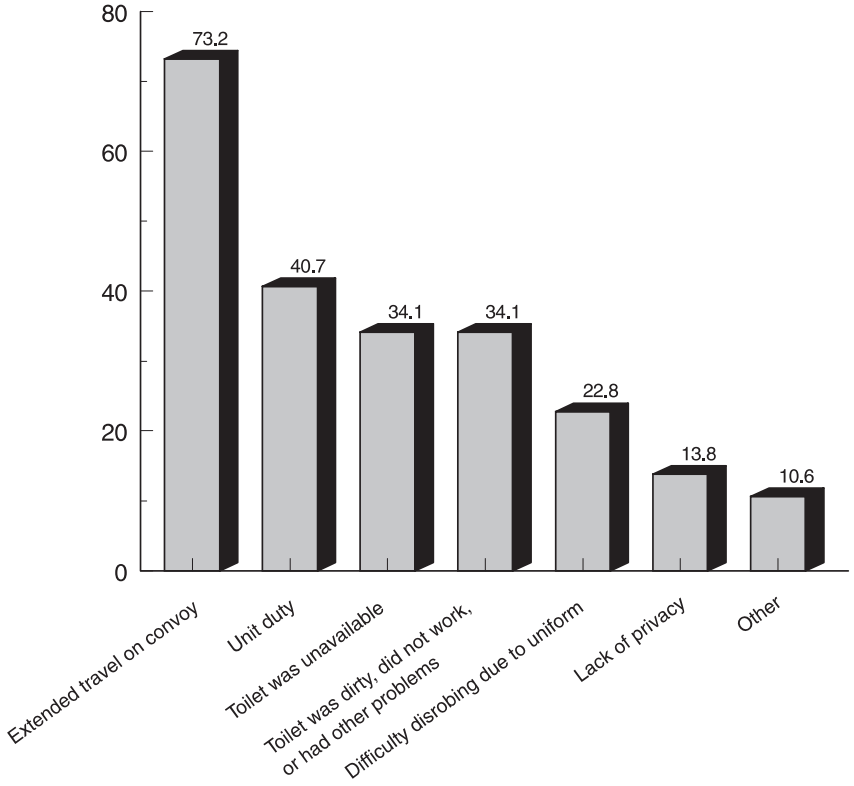
Obstacles to Urinating

A majority of women taking our survey said there were times during the deployment when they had encountered obstacles to urinating. Specifically, 126 (55 percent) of 230 respondents said this had happened to

[11]Nine of these 124 respondents entered more than one response to this question, indicating that they had important sources of feminine hygiene products in addition to base camp stores.

them, and 104 (45 percent) said it had not happened. Of those women who experienced this problem, 61 (50 percent) of 123 respondents said it had occurred at least 2 to 3 days a week, including 25 women (20 percent) who had experienced the problem daily.[12] By a large margin, the top obstacle to urinating was extended travel time on convoys (see fig. I.7). When leaving their base camp, U.S. soldiers in Bosnia are required to travel by convoy to enhance force protection. During our group interviews, women said these convoys could last several hours without a stop to urinate.

Figure I.7: What caused you to postpone urinating or prevented you from urinating?



Note: This figure shows responses from 123 women in our survey who reported that they had encountered obstacles to urinating during their deployment.

Source: Our analysis of survey responses.

[12]Of the 126 respondents who reported that that were times when they felt they had to postpone urinating, 3 did not answer this question, leaving a total of 123 respondents.

Unavailability of Birth Control Pills

Of 189 survey respondents, 156 (83 percent) said they had access to their preferred method of birth control during deployment, and 33 (17 percent) said they had not. Of those who said they had not had access, the most frequent form of birth control not available was birth control pills. Specifically, 13 (62 percent) of 21 respondents said birth control pills had not been available to them.[13] According to women we surveyed and interviewed, the primary problem concerning birth control pills was the limited selection for refill prescriptions at their base camp clinics. Several women said their brand had not been available and that they had to change prescriptions, sometimes more than once, after they deployed. Other women avoided this problem by bringing a long-term supply of pills with them.

[13]Of the 33 respondents who reported that they had not had access to their preferred birth control method during deployment, 12 did not answer this question, leaving a total of 21 respondents.

Prior Research on Health Care Needs of Deployed Women

Prior to the Persian Gulf War, very little research was published on women's health experiences while deployed or on the effectiveness of the health service support system in meeting women's medical needs. The Gulf War generated greater interest in these issues because of the large number of women—more than 40,000—who deployed. In three separate studies, Army doctors reviewed patient records from the war to assess women's health care needs.[1] In at least one study, Air Force women were surveyed about their health experiences during the Gulf War, including gynecological health care needs.[2] In addition, our office studied the deployment of women to the Persian Gulf and addressed concerns that had been raised about the impact of austere deployment conditions on women's health.[3] Some research has been conducted on other deployments as well. An Army study, for instance, reviewed the morbidity of women deployed to Korea and at a U.S. installation,[4] and Navy researchers have studied women's health experiences while deployed aboard ships.[5]

In fiscal years 1994 and 1995, Congress appropriated a total of $80 million for additional research on defense women's health issues. More than 100 studies were funded under this program, covering a broad array of subjects. The Institute of Medicine prepared a report in 1995 that served as guidance for the research program. The Institute's report noted "very little is being done to study the everyday aspects of gynecologic or reproductive health of military women, especially in field conditions" and "health services research should be conducted to study the accessibility and availability of women's health services in field operations and ways that

[1]J.F. Hines, Ambulatory Health Care Needs of Women Deployed With a Heavy Armored Division During the Persian Gulf War, Military Medicine, 157, 5:219, 1992; G. Markenson, Female Health Care During Operation Desert Storm: The Eighth Evacuation Hospital Experience, Military Medicine, 157, 11:610, 1992; and J.T. Hanna, An Analysis of Gynecological Problems Presented to an Evacuation Hospital During Operation Desert Storm, Military Medicine, 157, 5:222, 1992.

[2]A.S. Robbins, Availability, Accessibility, and Adequacy of Health Care Provided to USAF Active Duty Women In-Theater During Operation Desert Shield/Storm, Armstrong Lab, Brooks Air Force Base, Texas (Oct. 1995).

[3]Women in the Military: Deployment in the Persian Gulf War (GAO/NSIAD-93-93, July 13, 1993).

[4]J.D. Gunzenhauser, Comparative Morbidity Study of Active Duty Women Serving in Korea and Fort Lewis, Madigan Army Medical Center, Tacoma, Washington (May 1997).

[5]S. Nice, Sex Differences in Health Care Requirements Aboard U.S. Navy Ships, Naval Health Research Center (Report No. 90-2, Mar. 20, 1990); S. Nice, Sex Differences and Occupational Influences on Health Care Utilization Aboard U.S. Navy Ships, Military Psychology, 6(2), 109-123, 1994; R.G. Burr, Health Care Satisfaction: A Comparison of U.S. Navy Women With Men Aboard Ships, Naval Health Research Center (Report No. 96-28, Oct. 1996); and M.J. Schwerin, Shipboard Women's Health Care: Provider Perceptions, Military Medicine, 162, 10:666, 1997.

these might be improved." In 1998, the Department of Defense hired a contractor to assess the overall results of the research program and determine what research gaps remain.

According to the various published studies, men and women tend to experience similar types of illnesses and disorders while deployed, although there may be some gender differences for particular diagnoses. A study of sick call data at an Army division deployed to the Persian Gulf War evaluated gender disparities for seven major clinical diagnoses, which together accounted for 67 percent of all the sick call visits.[6] The study found that women and men were statistically similar for three diagnoses—acute gastrointestinal, respiratory, and dental disorders. Men were more likely to be diagnosed with dermatological and orthopedic disorders, and women were more likely to be diagnosed with psychiatric and optometry disorders. A study comparing the morbidity of male and female servicemembers deployed to Korea did not reproduce these results. This study found that women had higher rates of dermatological disorders than men did and that psychiatric and ophthalmic conditions represented only a small proportion of all clinic visits. A study of women's health aboard Navy ships found that, for both genders, about half of all sick call visits were for illnesses or disorders, another one-fourth were for injuries, and the remaining one-fourth were for health services (such as physical examinations).

The studies have consistently shown that, following patterns in the civilian sector and at peacetime garrisons, deployed women tend to visit medical providers for sick call more often than men. A Navy researcher concluded that it is the frequency, not the types, of health problems that distinguishes the health of men and women. That study found that the monthly sick call rate for women aboard ships was 1.79 times greater than for men. A subsequent study found a similar female-to-male ratio of shipboard sick-call rates—1.66 to 1. When the data was adjusted for age, however, the ratio decreased to 1.44 to 1 because the women aboard the ships were younger on average than the men and younger people tend to make sick call visits more often. Additionally, when visits for female-specific conditions were excluded, the female-to-male ratio decreased to 1.21 to 1. The study of servicemembers deployed to Korea and at a U.S. installation found that gender was a much more significant factor on morbidity than

[6]J.f. Hines, A Comparison of Clinical Diagnoses Among Male and Female Soldiers Deployed During the Persian Gulf War, Military Medicine, 158, 2:099, 1993.

were the effects of deployment. Women in Korea visited clinics at twice the rate of men and self-reported significantly worse health status. In an Army combat division deployed to the Persian Gulf, women made up approximately 6 percent of the total force but accounted for nearly 18 percent of all sick call visits to five support battalion medical units. These medical units, however, were located in areas behind the front lines where most women served (women are excluded from front-line ground combat positions). Thus, the analysis may have been skewed because the female-to-male ratio was higher in the rear, giving women comparatively greater access to health care. Several reasons for women's higher health care usage have been postulated, but there does not yet appear to be a consensus among researchers.

A number of the published studies calculated the proportion of female-specific health care needs as a percentage of women's overall health needs during deployment. In these studies, female-specific needs accounted for a minimum of 14 percent and a maximum of 26 percent of women's health needs. According to Army studies of the Gulf War, the most common gynecological diagnoses were vaginitis (mostly yeast infections), abnormal bleeding, pelvic pain, desire for birth control pills, and pregnancy. A gynecologist who reviewed these studies stated that the most common gynecological complaints women experienced during the Gulf War are also the most common seen in private practice.[7] A Navy study on gynecological care aboard one ship found that routine care, including Pap smears and birth control pill refills, accounted for 30 percent of visits, followed by sexually transmitted diseases (14 percent), menstrual abnormality (13 percent), vaginitis (10 percent), urinary tract problems (9 percent), and pregnancy-related issues (9 percent).

Female-specific health needs, while common, do not generally represent severe problems during deployments. Most gynecological conditions have been handled on an outpatient basis. During the Gulf War, gynecological hospital admissions accounted for a small percentage of total hospital admissions. (This percentage would have been even smaller had U.S. forces experienced the combat casualties that were predicted prior to the start of hostilities.) For instance, of 577 gynecological patient visits to one Army hospital in the Persian Gulf, only 9 patients were admitted. Of 86 women admitted to another Army hospital, 10 (12 percent) had

[7]D.S. Lyon, Medical Care of Women Deployed During Desert Storm, Southern Medical Journal, Vol. 89, No. 2 (Feb. 1996).

gynecological-related diagnoses. A third Army hospital recorded 17 gynecological-related admissions, accounting for 3 percent of all admissions.

Various studies also have found that the great majority of female-specific health needs can be addressed by a medical provider other than a obstetrical/gynecological specialist. One researcher stated that a provider armed with a basic knowledge of gynecology and a modicum of equipment, laboratory, and pharmacy support would be sufficient to evaluate most female-specific complaints.

The published research indicates that most women surveyed report that they get the health care they need. An Air Force survey of women deployed to the Persian Gulf showed that women gave high overall ratings for availability, accessibility, and adequacy of health care during the deployment. However, there have been some troubling survey findings with respect to gynecological care. The Air Force survey showed the following:

- A substantial percentage (66 percent) of those with gynecological conditions during deployment said their illnesses persisted after the deployment.
- Of the women with gynecological conditions, 74 percent reported seeking medical care during the deployment. However, 89 percent said they would have sought care had they been back in the United States. Reasons for not seeking care included (1) they did not think their conditions were serious enough, (2) they had no confidence in the medical providers, or (3) they would have had to wait too long to receive care. Nearly half the women were embarrassed about their gynecological problems.
- Nearly 40 percent of the respondents had to see a medical provider two or three times for a condition.
- Women gave their highest negative rankings to providers' efforts to explain the women's symptoms.

A Navy survey of women and men aboard ships found that a majority of women were satisfied with their health care during sick call visits, but they reported less satisfaction than men with their general health care, health care providers or consultations, the quality of service at sick call visits, and the extent to which sick call visits met their needs. Women also reported lower distress relief and lower levels of rapport with health care providers.

While they did not describe their general health less favorably than men, women reported significantly more symptoms of distress.

Scope and Methodology

To review medical services available to servicemembers deployed to the field, we focused on female-specific medical services and health-related issues for Army personnel who had deployed recently to Bosnia. We focused on female-specific health care because it constituted up to one-fourth of women's health care needs in prior deployments. We selected the U.S. deployment to Bosnia because it is a major, ongoing operation. At more than 3 years old, it is also a relatively mature operation and no longer can be said to represent austere field conditions. During the course of our review, we were told that the health and hygiene conditions today are greatly improved from the first months of the operation when there was very little infrastructure support. Currently, a contractor provides base support, and amenities have been added to increase the comfort level of U.S. forces deployed there.

To determine the availability of data collected on female soldiers' health care needs in Bosnia, we met with or contacted cognizant Army officials to discuss the outpatient data collection system. We obtained an analysis of disease and non-battle-related injury data that was conducted by Army health officials responsible for gathering the data. We also obtained a 1998 Army health assessment of the Bosnia deployment that considered various health measures and a briefing on a mental health study of soldiers in Bosnia that was conducted by Army officials in Germany.

To obtain the views of health care officials on female-specific medical services, we interviewed health officials and medical staff responsible for providing care to soldiers deployed to Bosnia. Among those interviewed were the Commander and Deputy Chief for Clinical Services, 67th Combat Support Hospital, Wurzburg, Germany; Commander, 396th Combat Support Hospital, U.S. Army Reserve; Command Surgeon, 1st Armored Division, Bad Kreuznach, Germany; and Commander, 261st Area Support Medical Battalion, Fort Hood, Texas. We also interviewed officials in the Office of the Command Surgeon, U.S. Army Europe; the Europe Regional Medical Command; and the Office of the Command Surgeon, V Corps, Heidelberg, Germany; the 2nd Armored Cavalry Regiment, Fort Polk, Louisiana; the U.S. Army Surgeon General's Office, Baileys Crossroads, Virginia; and the U.S. Army Medical Command, Fort Sam Houston, Texas. We interviewed 23 medical providers who served in Bosnia—14 doctors and 9 physician assistants. Almost all of these medical personnel served in primary care positions, either at the base camps or in the hospital. We also met with a small number of combat medics who staffed the base camp clinics.

To obtain the perspective of women who deployed to Bosnia, we conducted a survey of 234 female soldiers. Of the 234 soldiers surveyed, 144 (62 percent) were assigned to the 2nd Armored Cavalry Regiment, Fort Polk, Louisiana, and 90 (38 percent) were assigned to the following units in Germany: 130th Engineering Brigade, Hanau; 22nd Signal Brigade, Darmstadt; 18th Corps Support Battalion (3rd Corps Support Command), Hanau; 127th Maintenance Support Battalion, Hanau; 501st Military Intelligence Battalion, Dexheim; Headquarters, 1st Armored Division, Bad Kreuznach; and 527th Military Police Company, Wiesbaden. In Germany, the U.S. Army's V Corps selected units for us to visit. The units identified and provided female soldiers to participate in our survey. We visited each of the selected units to administer the survey. Because our survey participants were not randomly selected, the results cannot be projected to a larger population.

Of the 234 survey participants, 158 (68 percent) were in the E-1 to E-4 pay grade group, 54 (23 percent) were in the E-5 to E-9 pay grade group, and 21 (9 percent) were officers.[1] The average length of deployment for the survey participants was 7.3 months, and their average age was 25.6 years. Most of the women served sometime in 1998, although a few served earlier tours. We asked those who had deployed more than once to provide information concerning their most recent deployment. We did not determine how many of the survey participants were on their first deployment when they served in Bosnia. The great majority of survey participants served at one of the three following base camps: Tuzla Main, 74 (32 percent); Guardian Base/Blue Factory, 64 (28 percent); and Comanche, 34 (15 percent). Another 44 participants (19 percent) served at nine other base camps in Bosnia, and 16 (7 percent) served in Croatia[2] in support of the U.S. peace operation in Bosnia.

To obtain a more complete picture of female soldiers' views, we interviewed 80 of the 234 soldiers surveyed. These interviews were conducted in small groups of 2 to 13 people. For each interview, we grouped the comments into overall themes. Likewise, we grouped the write-in comments to the survey into overall themes.

To supplement our work in Bosnia, we conducted a literature search for research on women's health issues during deployments. We also reviewed

[1]One woman did not identify her pay grade group.

[2]Two women did not identify their primary base camp.

Department of Defense research programs, contacted officials responsible for overseeing defense women's health research, and interviewed selected researchers.

We performed our work between May and December 1998 in accordance with generally accepted government auditing standards.

Comments From the Department of Defense

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, DC 20301-1200

HEALTH AFFAIRS

11 FEB 1999

Mr. Mark E. Gebicke
Director, Military Operations and Capabilities Issues
U.S. General Accounting Office
Washington, D.C 20548

Dear Mr. Gebicke:

This is the Department of Defense (DoD) response to the General Accounting Office (GAO) draft report, "GENDER ISSUES: Medical Support for Female Soldiers Deployed to Bosnia," dated January 11, 1999 (GAO Code 703268/OSD Case 1731).

We concur with the GAO's findings concerning medical services provided for female service members deployed to the field. Increasing numbers of women are serving as active duty and reserve members of the U.S. Armed Forces. As their numbers increase, issues related to the performance, fitness, and health of these women become increasingly important. Adequate preparation of all service members for deployment is a critical element in successfully completing the assigned mission.

There are no pertinent disagreements to the overall draft report. The draft report comments acknowledge that the sample size is small and non-random but covers the entire area of operation. The report acknowledges that the types of gynecological problems experienced by deployed women were common problems that were well within the clinical scope of the deployed providers.

The GAO's recommendation that the Secretary of the Army take steps to improve the preparation of female soldiers for deployment will be adopted. Military units will provide information to their female members on female-specific field health care and hygiene issues as well as information on scope and access to deployed health services as a part of routine deployment preparations.

The point of contact in my office on this matter is Colonel Margaret J. Knapp, MC. For additional information, your staff may contact her at (703) 681-1703 ext. 5217.

Sincerely,

John F. Mazzuchi

John F. Mazzuchi, Ph.D.
Deputy Assistant Secretary
(Clinical and Program Policy)

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